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Docket No.: 4266-0143PUS1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jordi TORMO I BLASCO et al.

Application No.: 10/579,395

Confirmation No.: 8160

Filed: May 15, 2006

Art Unit: 1614

For: 6-(2,4,6-TRIHALOPHENYL)
TRIAZOLOPYRIMDINES, THEIR
PREPARATION AND THEIR USE FOR
CONTROLLING HARMFUL FUNGI, AND
COMPOSITIONS COMPRISING THESE
COMPOUNDS

Examiner: Not Yet Assigned

LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Subsequent to the filing of the above-identified application on May 15, 2006, attached hereto is an English translation of the International Preliminary Examination Report (Form PCT/IPEA/409) that should be made of record in the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or to credit any overpayment to Deposit Account No. 02-2448 for any

Application No.: 10/579,395

Docket No.: 4266-0143PUS1

additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Dated:

MAR 26 2007

Respectfully submitted,

By 

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Attachment(s)

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000055172	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/014208	International filing date (day/month/year) 14.12.2004	Priority date (day/month/year) 17.12.2003
International Patent Classification (IPC) or national classification and IPC C07D487/04, A01N43/90		
Applicant BASF AKTIENGESELLSCHAFT		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of **8** sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of _____ (indicate type and number of electronic carrier(s)) _____ containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/014208

Box No. 1

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-26 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 1-16 _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* _____ received by this Authority on _____
- nos.* _____ received by this Authority on _____
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/014208

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-16	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-16	NO
Industrial applicability (IA)	Claims	1-16	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
Reference is made to the following documents:			
D1: US-B1-6 242 451 (PEES KLAUS-JUERGEN) 5 June 2001 (2001-06-05)			
D2: US-A-5 994 360 (PFRENGLE ET AL) 30 November 1999 (1999-11-30)			
D3: WO 03/008416 A (BASF AKTIENGESELLSCHAFT; TORMO I BLASCO, JORDI; SAUTER, HUBERT; MUELLE) 30 January 2003 (2003-01-30)			
D4: WO 02/083677 A (BASF AKTIENGESELLSCHAFT; TORMO I BLASCO, JORDI; SAUTER, HUBERT; MUELLE) 24 October 2002 (2002-10-24)			
D5: WO 03/008415 A (BASF AKTIENGESELLSCHAFT; TORMO I BLASCO, JORDI; SAUTER, HUBERT; MUELLE) 30 January 2003 (2003-01-30)			
D6: US-B1-6 204 269 (PFRENGLE WALDEMAR ET AL) 20 March 2001 (2001-03-20)			
D7: WO 02/38565 A (BASF AKTIENGESELLSCHAFT; TORMO I BLASCO, JORDI; DITRICH, KLAUS; SAUTER) 16 May 2002 (2002-05-16)			
D8: US-B1-6 380 202 (PEES KLAUS-JUERGEN ET AL) 30 April 2002 (2002-04-30)			
D9: EP-A-1 359 150 (BASF AKTIENGESELLSCHAFT)			

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

5 November 2003 (2003-11-05)

The application relates to 6-(2,4,6-trihalophenyl)-triazolopyrimidines, to a method for the production thereof, to the use thereof for combating pathogenic fungi and to agents containing the same.

1) PCT Article 33(2)

The claimed 6-(2,4,6-trihalophenyl)-triazolopyrimidines have two characteristic features when compared with the prior art:

- a) the halogen substitution of the phenyl ring can be only chlorine or fluorine, at least one group being chlorine; and
- b) the X group in the 5 position of the condensed ring system is cyano, alkoxy, etc., halogen not being included.

Document D1 is the only document to include the first feature (see tables I and II).

Document D2 also concerns 6-(2,4,6-trihalophenyl)-triazolopyrimidines, in which all halogen groups are fluorine. In that document, however, the corresponding X group is defined as methyl.

Documents D3, D4 and D5 also concern substituted 6-phenyl-triazolopyrimidines, which have and disclose the same definition as the current

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

application for the X group. D3, however, has a methoxy- instead of a halogen-substitution in the phenyl ring. In D4 and D5, the phenyl ring is substituted with two halogen groups.

Documents D6, D7 and D8 are relevant to the subject matter of claims 7-11. In all three documents the corresponding X group is defined as halogen (in D7 it is also defined in claim 1 as cyano, alkyl or alkoxy, although in the examples in table A it is specified only as chlorine).

Document D9 is relevant to method claims 12 and 13. However, although the compound examples from D9 are obvious, none of the features that are claimed in the present application are disclosed in the same example.

The subject matter of the application is therefore considered to be formally novel.

2) PCT Article 33(3)

The application can be considered to address the technical problem of finding further 6-(2,4,6-trihalophenyl)-triazolopyrimidines for combating pathogenic fungi.

Document D1 is considered the closest prior art and discloses a fluorine or chlorine substitution in positions 2, 4 and 6 of the phenyl ring, at least one group being chlorine (see tables I

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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and II, column 4, lines 36-54). The 6-(2,4,6-trihalophenyl)-triazolopyrimidines disclosed therein are also used to combat pathogenic fungi. The difference between D1 and the present application lies in the definition of the substitution in the 5 position of the condensed triazolopyrimidine ring system.

In document D2 and in relation to 6-(2,4,6-trifluorophenyl)-triazolopyrimidines, said group is defined as methyl. Furthermore, pages 5-8 and table I of D4, and pages 7-9 and compound I-19 in table I of D5 show an X-substitution as in the present application for 6-(2,6-dihalophenyl)-triazolopyrimidines.

Consequently, with regard to the finding of further 6-(2,4,6-trihalophenyl)-triazolopyrimidines for combating pathogenic fungi, a person skilled in the art would arrive at the structural design of the claimed compounds by combining D1 with, for example, D4.

The subject matter of the present application therefore cannot be considered inventive.

It must also be mentioned that although the application was able to show that the claimed compounds display a good level of activity in the combating of pathogenic fungi, that activity should have been compared with that of the closest prior art (D1 and D4). Only in the event of a

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

surprising effect could an inventive step be
acknowledged for the present "selection
invention".

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The limited variations of the substituents defined in claim 1 that are shown in the examples do not justify the scope of the claims (PCT Article 6: "supported by the description").

An applicant may claim merely obvious modifications or variations of the examples mentioned in the description, since such examples must undergo a certain generalisation in the claims: the technical features that are identified in the description or the examples as being essential to the invention should be the same as those that are used to define the invention in the claims. This is because the technical problem to be solved should be solved by the entire scope of the claimed subject matter of the application (by each compound that is covered by the definition of the subject matter of the application) and not only by individually tested compounds, in particular when the problem of interest is considered to be the preparation of compounds which act on a biological system (a system that is dependent on many different parameters). If that were not the case, the subject matter of each application could be arbitrarily extended without limit, a fact which would involve the risk of compounds which do not solve the technical problem of interest also being claimed.